

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method of managing network traffic in a quality of service (QoS) enabled network, wherein quality of service is based on one or more qualitative factors, the method comprising,

determining that the QoS enabled network is configured to transmit and receive network messages using the resource reservation protocol;

extending the resource reservation protocol to include, for each data transmission request, qualitative information including the type of service requested, an application identifier, and the identity of a sub flow of the identified application;

receiving a data transmission request for network resources via a signaling the resource reservation protocol from a software application that is unable to quantify resource reservations as a result of characteristically short data transmission bursts, the request including information identifying an application;

evaluating the information identifying the application against policy information; and
determining access to network resources based on a result of the evaluation.

2. (Original) The method of claim 1 wherein the information identifying the application includes an application identifier.

3. (Original) The method of claim 1 wherein the signaling protocol comprises RSVP.

4. (Currently Amended) The method of claim 1 wherein determining access to network resources based on a result of the evaluation includes ~~20~~ admitting or denying the request.

5. (Original) The method of claim 1 wherein determining access to network resources based on a result of the evaluation includes returning marking information in response to the request.

6. (Original) The method of claim 5 wherein the marking information represents a relative priority level.

7. (Original) The method of claim 5 wherein the marking information includes a differentiated services codepoint.

8. (Original) The method of claim 5 wherein returning marking information includes providing a DCLASS object.

9. (Original) The method of claim 5 wherein the DCLASS object includes a differentiated services codepoint.

10. (Original) The method of claim 1 wherein the request further includes quantitative information.

11. (Original) A computer-readable medium having computer executable instructions for performing the method of claim 1.

12. (Currently Amended) A method of requesting network resources in a quality of service (QoS) enabled network, wherein quality of service is based on one or more qualitative factors, the method, comprising:

determining that the QoS enabled network is configured to transmit and receive network messages using the resource reservation protocol;

extending the resource reservation protocol to include, for each data transmission request message, qualitative information including the type of service requested, an application identifier, and the identity of a sub flow of the identified application;

constructing a request message in accordance with a signaling the resource reservation protocol, the request message including information identifying a type thereof as qualitative, and further including qualitative information; and

sending the request message to request network resources, the request message passing through at least one network device that evaluates the qualitative information in the request message to determine access to network resources; and

determining access to network resources based on a result of the evaluation.

13. (Original) The method of claim 12 further comprising, receiving a return message.

14. (Original) The method of claim 12 wherein the signaling protocol comprises RSVP.

15. (Original) The method of claim 12 wherein the qualitative information has an associated hierarchy.

16. (Original) The method of claim 12 wherein determining access to network resources based on a result of the evaluation includes admitting or denying the request.

17. (Original) The method of claim 12 further comprising, receiving a return message indicating that access to the requested resources is denied.

18. (Original) The method of claim 12 further comprising, receiving a return message including marking information.

19. (Original) The method of claim 18 wherein the marking 5 information represents a relative priority level.

20. (Original) The method of claim 18 wherein the marking information includes a differentiated services codepoint.

21. (Original) The method of claim 18 wherein returning marking information includes providing a DCLASS object.

22. (Original) The method of claim 21 wherein the DCLASS object includes a differentiated services codepoint.

23. (Original) The method of claim 18 further comprising, attaching the marking information to subsequent flow.

24. (Original) The method of claim 12 wherein the request message is sent towards a receiver.

25. (Original) A computer-readable medium having computer executable instructions for performing the method of Claim 12.

26. (Currently Amended) A method of managing network traffic in a quality of service (QoS) enabled network, wherein quality of service is based on one or more qualitative factors, the method comprising:

determining that the QoS enabled network is configured to transmit and receive network messages using the resource reservation protocol;

extending the resource reservation protocol to include, for each data transmission request, qualitative information including the type of service requested, an application identifier, and the identity of a sub flow of the identified application;

receiving a data transmission request for network resources via a-signaling the resource reservation protocol from a software application that is unable to quantify resource reservations as a result of characteristically short data transmission bursts, the request including qualitative information;

evaluating the qualitative information in the request against policy information; and
returning information based on a result of the evaluation including information that specifies to an upstream sender how to mark packets for classification thereof, and
determining access to network resources based on a result of the evaluation.

27. (Original) The method of claim 26 wherein the information in the request further includes quantitative information.

28. (Original) The method of claim 26 wherein the qualitative information in the request includes an application identifier.

29. (Original) The method of claim 26 wherein the request comprises an RSVP PATH message.

30. (Original) A computer-readable medium having computer-executable instructions for performing the method of Claim 20.

31. (Currently Amended) In a computer network, a system for providing quality of service via a signaling protocol, comprising:

a sender, the sender determining that the QoS enabled network is configured to transmit and receive network messages using the resource reservation protocol, extending the resource reservation protocol to include, for each data transmission request, qualitative information including the type of service requested, an application identifier, and the identity of a sub flow of the identified application and providing a message comprising qualitative information therein including information identifying an application;

a receiver, the receiver receiving the message from the sender and providing a return message in response thereto; and

a policy enforcement device, the policy enforcement device evaluating at least one of the messages communicated between the sender and the receiver, and determining access to resources based on ~~the qualitative information~~ a result of the evaluation.

32. (Original) The system of claim 31 wherein the information identifying the application includes an application identifier.

33. (Original) The system of claim 31 wherein the policy enforcement device includes a router.

34. (Original) The system of claim 31 wherein the policy enforcement device includes a switch.

35. (Original) The system of claim 31 wherein the signaling protocol comprises RSVP.

36. (Original) The system of claim 31 wherein the policy enforcement device determines access to resources by adding marking information to the return message.

37. (Original) The method of claim 36 wherein the marking information represents a relative priority level.

38. (Original) The system of claim 36 wherein the marking information includes a differentiated services codepoint.

39. (Original) The system of claim 36 wherein the marking information includes a DCLASS object.

40. (Previously Presented) The system of claim 39 wherein the 15 DCLASS object includes a differentiated services codepoint.

41-51. (Cancelled).

52. (New) The method of claim 1, wherein the qualitative information comprises a DCLASS object.

53. (New) A method of managing network traffic in a quality of service (QoS) enabled network, wherein quality of service is based on one or more qualitative factors, the method comprising:

- determining that the QoS enabled network is configured to transmit and receive network messages using the resource reservation protocol;

- extending the resource reservation protocol to include, for each data transmission request, qualitative information including the type of service requested, an application identifier, and the identity of a sub flow of the identified application;

- receiving a data transmission request for network resources via the resource reservation protocol from a software application that is unable to quantify resource reservations as a result of characteristically short data transmission bursts, the request including a DCLASS object including qualitative information;

- evaluating the qualitative information in the request against policy information;

- returning information based on a result of the evaluation including information that specifies to an upstream sender how to mark packets for classification thereof; and

- determining access to network resources based on a result of the evaluation.